



COMPetencies for Agencies for Sustainable Site conversion



# PROJECT PROPOSAL

## SUSTAINABLE REGENERATION OF PAVILION 15 (ZAGREB FAIR)

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Zagreb, March 2017.



## General information about the location

Name:	ZAGREB FAIR – Pavilion 15
Address:	Avenija Dubrovnik 15, 10020 Zagreb
Country:	Croatia
Current condition (abandoned, misused...):	Decrepit, out of use
Former use:	Fair, exhibit
Owner (public, private, mixed):	Public
Area (gross square meters):	3.902 m <sup>2</sup>

Photography of the location:





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## PROJECT PROPOSAL ABSTRACT

Pavilion number 15 is located on the eastern edge of Zagreb Fair complex. It is a protected cultural heritage, designed by architect Giuseppe Sambito in 1962 as an exhibition pavilion to present the newest achievements of Italian economy.

The space is unique and undivided, with 3902m<sup>2</sup> of space area, 11m height (with the middle part 14m height). It is characterized by steel construction with 12 reversed pyramids, grid-like (lattice) roof trusses and full glass façade. The pyramids and glass envelope are the most recognizable elements of this Pavilion.

Pavilion today is in a state of disrepair and dilapidation with numerous damages as a consequence of corrosion and years of neglect and being unused.

Repurposing project is a result of present state analysis, local community opinion survey (within the city districts Novi Zagreb east and Novi Zagreb west) and functional capabilities and restriction of the Pavilion. The Eco-market proposal which will promote local and ecologically produced food completely meets the needs of the city districts (the lack of specialized eco-markets), the character of the districts (mostly residential area), the character of the Pavilion, in a functional way (high glass hall), the character of the Pavilion in the value way (the need to protect the cultural heritage with non-invasive methods) and actual need for sustainable, ecological and local methods for food and lifestyle habits.

The Pavilion repurposing is not going to be only about making an Eco-market. Besides presenting and selling food and other products, Pavilion will be a place of sustainable lifestyle promotion; with culinary classes, healthy and sustainable lifestyle educations, make-your-own-compost workshops, recycling workshops and similar.

The concept also has touristic and cultural aspect: the plan is to organize themed evenings and presentations of specialties and cuisines of foreign countries (Spanish cuisine week, Fish specialties week, Raw food week...) with high school students (Hospitality schools and similar) and representatives and workers of different Embassies in Zagreb as hosts. This will bring out the memories of the international fairs in Zagreb Fair when national pavilions promoted the values of their countries.

The Pavilion repurposing project includes future and potential users of the new Eco-market as the most important partners; with the local community opinion survey in the first phase and planned design charrettes – intense planning meetings where residents of the Novi Zagreb districts and Zagreb as whole, experts (architects, sociologists), local government representatives, institutions (schools, kindergartens) representatives work together in creating and following the vision of the Project. This creates the sense of ownership and responsibility for the area, identification with Zagreb Fair, strengthens the social cohesion of the city districts and presents a strong and considerable social capital.

The project interventions include the implementation of solar photovoltaic cells which will provide the electricity for the Pavilion with surplus distributed to other pavilions of Zagreb Fair. Generated organic waste will be used as a biogas and then used for heating. The volume of the Pavilion and

glass façade makes long sedentary work during winter in the Pavilion difficult. Additional interventions to make it less difficult are not planned.

The first phase predicts temporary settling with structures that will act as a “frame” and enable different activities. These structures are the elements of division and farming (steel cables or nets outstretched in the middle of the Pavilion, between the floor and the lattice roof construction; the structures could withstand suspending the pots with saplings on different levels, climbing plants and mini irrigation system), the elements of division and heating (double layered “baldachins” made from light, transparent synthetic material shaping “warm rooms” in the middle area of the Pavilion; that enables comfortable staying in the Pavilion without losing excess heating in the space) and furniture elements for exhibition, storage, farming, compost and similar (mobile, interconnected transformable frames made from wood; to encourage reusing of still usable materials and items; their recycling is easy; every frame can be upgraded with various other elements that can serve specific purpose).

In front of the Pavilion a plant garden is planned, bearing in mind the rules of permaculture, biodynamic agriculture and vegetable cultivation which enables multiple harvests.

The Pavilion repurposing project will encourage selling but also trading and exhibiting of the products. It will have a social component because smaller producers could trade their surpluses, exchange them for something else or have very small amounts of their products on the market. Such public visibility and the possibility to enter the market, sell the products and earn the money presents also a very important economic sustainability for a significant part of the society. The possibility of trading and exchanging and the concept of healthy, bio, eco and locally produced food represents environmentally sustainable model of food. That abates the food miles which consequentially lowers the level of greenhouse gasses. Pavilion will have educational function while promoting the sustainable model of farming (permaculture, biodynamic agriculture), trading healthy eco produces (seeds and such), advising on nutrition and health benefits of certain products. Pavilion repurposed like this will become a new public place for all residents of (Novi) Zagreb, for meeting and enjoying and at the same time it will strengthen the spirit of community and the sense of belonging to the place.

## OUTLINING THE PROJECT PLAN

For some of us living in its vicinity, “Zagreb Fair” represents different traffic issues and lack of parking spots during the fairs. The golden times are gone, so our generation remembers only those big, mono-sector fairs, which reduced recently in regularity and quality of shows. The international spirit of Zagreb Fair, which is manifested in national pavilions, is not among the first thoughts that come to our mind (except for the Chinese Pavilion).

In decision-making on the conversion of the Pavilion, these parameters were considered:

- a) The needs of the **neighborhood**: lack of specialized, eco-markets in the neighborhoods of Novi Zagreb and Zagreb in general
- b) Character of the **neighborhood**
- c) The functional character of the **Pavilion**
- d) Character of the **pavilion** regarding its value: protected cultural good (need/necessity for the Pavilion to be protected and preserved, while being used)
- e) Conversion model – specialized market: enables non-permanent use and doesn’t require complex interventions that would irreversibly change the Pavilion

As far as organizational / operational aspects are concerned, most important are these:

- Recommended dynamics of holding the markets is 1x-2x weekly
- Car access
- Electricity
- Exhibitors bring their own equipment
- No waste
- Low fees for exhibitors

### Why we chose food

Croatian agricultural land is characterized by small parcels, which has its benefits. Unlike industrial agriculture which is mostly based on monoculture and it is successful because of cultivation of large areas of land, small family farms produce food in unconventional ways: using labor, principles of biodynamic, permaculture and similar methods, without using chemicals. They are recognized by European Parliament. The European Parliament resolution of 4<sup>th</sup> February 2014 about the future of small-scale and family farming supports the food grown on Croatian farms, which is ideal for selling in small, local markets and green products shops.

### City of Zagreb – farming

The rural and suburban area of Zagreb, with developed agricultural sector comprises 68 villages, or 12,146 households and 42,507 inhabitants. The total area of agricultural land in the City of Zagreb is 21.732,80 ha, i.e. 33.9% of the total area of the city. Approximately 80% of this land is privately owned while 20% is owned by the state. The average land size is extremely unfavorable and amounts to only 3.5 ha, while 15% of agricultural parcels make them less than 0.1 ha.

ZagrebPlan lists, as some of the City's developmental needs in the field of agriculture:

- improve the linkage of producers for placement on the ZG market, given the increase in demand for food produced in the immediate vicinity or for "domestic food"
- Establish city market profiles for placement of fresh agricultural products and improve customer relations
- define Zagreb as a promotional center for local agricultural and forestry products
- Encourage young people to deal with farming

### City of Zagreb – City Gardens

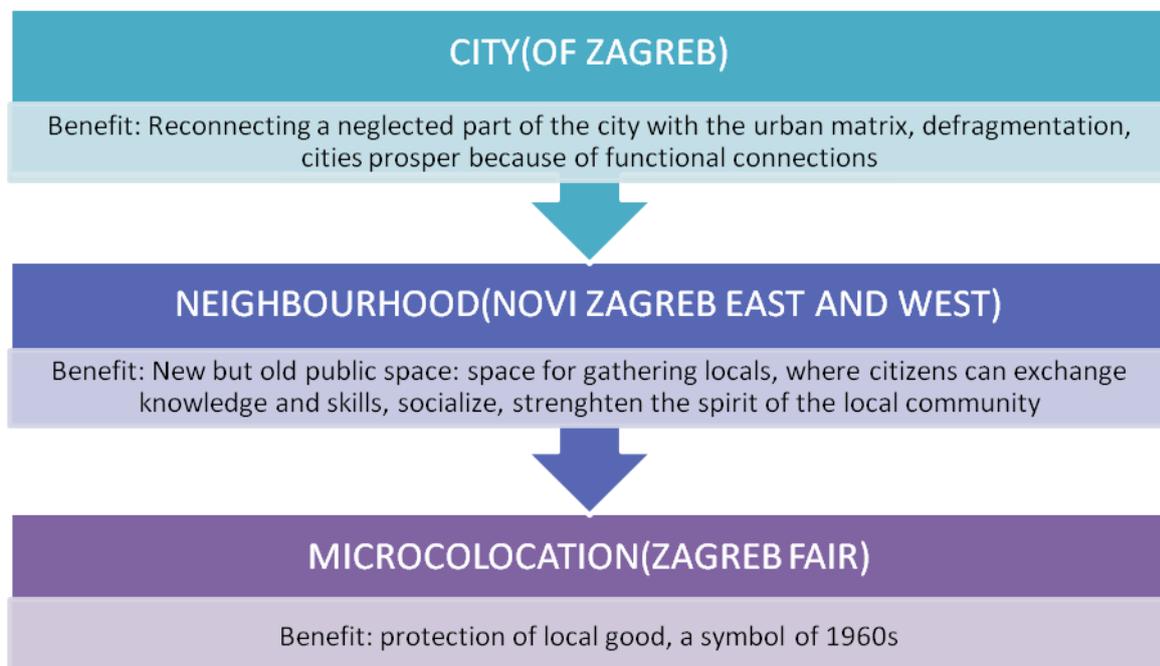
In the area of the City of Zagreb there are currently 11 city gardens with over 2000 garden plots in the area of 21.00 ha. Since only one member of the joint household can apply for a garden parcel, it can be assumed that more than 2,000 users of city gardens are present in the city, or more than 2,000 potential sellers and exhibitors in the Pavilion area.

### Zagreb County – Farming

The County of Zagreb is characterized by a large share (58.7%) of farms in the total number of households, while in rural municipalities that share is bigger. Of the total value of agricultural production in the Republic of Croatia, it is about 1/10 of the Zagreb County, so it is on the third place after Osijek-Baranja and Bjelovar-Bilogora. One of the fundamental developmental problems is the pronounced deterioration of the property. Family farms are very small: the average utilized area is only 1.93 ha on average 5.5 plots, with an average parcel size of 0.39 ha.

## SWOT ANALYSIS

Strengths	Weaknesses
<ul style="list-style-type: none"> <li>- Lack of this type of eco-markets in the neighbourhood of Novi Zagreb</li> <li>- Lack of permanent eco market which sells local food made in Zagreb</li> <li>- Residential character of Novi Zagreb</li> <li>- Interest of ecological associations in using the Pavilion, which facilitates farmers' promotion</li> <li>- ZagrebPlan has recognized the importance of fresh farm products</li> <li>- More than 2000 garden areas which are used by citizens</li> </ul>	<ul style="list-style-type: none"> <li>- Non-quality solutions for heating and cooling</li> <li>- not appropriate for longer stay in the winter</li> <li>- Lack of similar farmers' markets</li> <li>- safety is not assured</li> </ul>
Opportunities	Threats
<ul style="list-style-type: none"> <li>- There are similar initiatives (in the space of Ambienta Pavilion Go Green- synergy)</li> <li>- EU funds can be used in order to recover the Pavilion</li> <li>- Cooperation with Italian Embassy</li> </ul>	<ul style="list-style-type: none"> <li>- lack of funds for recovery of the Pavilion</li> <li>- danger of ruining the complex</li> <li>- image of the neighborhood as distant</li> <li>- poverty of residents</li> </ul>



## Program: potential regeneration of the Pavilion

- Organic farmers' market
- Cooking workshops
- Catering (gastronomic) shows
- Sustainable lifestyle workshops
- Urban and farming meetings

One complementary project in Zagreb:

### Concept store Go Green

- GoGreen je is the first Croatian virtual and physical platform for selling local organic farming products. It is one of the biggest domestic clusters of small farming products.
- The store is located just across the Zagreb Fair building



# 1. CONTEXT ANALYSIS OF THE LOCATION

- **Administrative location** - the city district of Novi Zagreb-West
- **Spatial coverage** - the city districts of Novi Zagreb-west and Novi Zagreb-east (ZV - viewed as an area gravitating and gravitating to surrounding settlements: Kajzerica, Siget, Središće, Sopot and Trnsko, but also wider)
- **Area** (NZ-West + NZ-East) - 6,263.87 ha (62,637 km<sup>2</sup>) + 1654,33 ha (16,544 km<sup>2</sup>) = 7,918.2 ha (79,181 km<sup>2</sup>)
- **Population** (NZ-West + NZ-East) (Population Census 2011, CBS) - 58,103 (one of the largest in Zagreb) + 59,055 = 117,158 inhabitants

Geographical position of Pavilion 15:



*Red – Pavilion 15 / Orange – Zagreb Fair / Yellow – City districts' borders*

There are three markets (which operate within the Zagreb Holding) located in the area of New Zagreb, i.e. food markets located in the wider city area. It is evident that there is no market in the vicinity of Zagreb Fair. There is only one eco-market in the area of New Zagreb. The largest number of eco markets is located in the north of the Sava River, with a somewhat larger concentration in the wider city center. This situation indicates the need for the establishment / opening of a specialized eco-market in the Zagreb Fair area, which would meet the demand for organic products in this part of the city.

Spatial planning regulation: GUP of Zagreb (09/2016)

- On mixed surfaces - predominantly residential, and on mixed surfaces - mainly for business purposes, buildings can be built and design areas for: marketplaces
- 4A Urban Rules: Protection and Decoration of Complexes of one purpose
- 4B Urban Spatial Planning Procedures: There is no obligation to design architectural-urban plan
- the area north of the INA building along the V. Holjevac Avenue (adjacent area) = also a city project
- 4A - Arrangement and urban renewal of building construction
- 4B - Obligation to design architectural and urban planning

## **City project**

- City projects are being developed for interventions in the area where the City is a partner in the project, whether it is the owner, or has invested or will invest in them in order to create new urban quality (public and social buildings, parks, infrastructure etc.)
- Art. 101 - Possible urban solutions of such a defined program are examined by the implementation of a public urban-architectural tender in the process of drafting an implementation document of physical planning referred to in Article 99 of this Decision of the GUP of the City of Zagreb

The elements of urban matrix of Zagreb Fair are:

- Unique outline (at the entrance, west),
- High quality of horticultural surfaces and solitaires (in the entrance axis, west),
- Area of the Zagreb Fair Square (in front of the entrance and towards the north, up to Pavilion No. 36) - PROTECTION MEASURES: Maintenance of existing moves of empty areas that define urban matrix, horticultural areas and solitaires, and creation of new green areas

*Source: Conservation Documentation, City of Zagreb, City Office for the Protection of Cultural and Natural Monuments, Zagreb, 2003 Zagreb 2006.*

## Overview of Socioeconomic Indicators

The analysis showed that the area near Zagreb Fair is heterogeneous by numerous indicators. There is no uniform type of town council or typical profile of the inhabitants of Zagreb Fair area. However, some similarities exist, so in general it can be said that all of these town councils have small households, their residents live in medium-sized flats (a large number of single households). Furthermore, three local councils from the Dubrovnik Avenue share more similarities than other town councils, so the oldest inhabitants (from the analyzed 5 local committees) live here, it is characterized by high population density and population decline in the period 2001-2011.

Here are most important elements for each town council:

<b>KAJZERICA:</b> <ul style="list-style-type: none"> <li>- low density of population (10-20st / hectare)</li> <li>- the youngest local committee (average age 30-35 years)</li> <li>- Significant change in the number of inhabitants in the period 2001-2011, with a population increase of more than 60%</li> <li>- a significant number of university educated people aged 15 and over (40-50%)</li> <li>- one of the two local councils (Kajzerica, Središće) with a large number of unemployed (6-7%)</li> </ul>		<b>SREDIŠĆE:</b> <ul style="list-style-type: none"> <li>- a local council (Kajzerica, Središće) with a large number of unemployed (6-7%)</li> <li>- medium high number of persons in the household (2.5-2.7)</li> </ul>
<b>ZAGREB FAIR</b>		
<b>TRNSKO:</b> <ul style="list-style-type: none"> <li>- extremely high density of population (&gt; 150 st / hectare)</li> <li>- Among the older local councils (Trnsko, Siget, Sopot) (the average age is 44-47 years old)</li> <li>- in the period from 2001 to 2011 The number of inhabitants decreased by -20% to -10% (Trnsko, Siget, Sopot)</li> <li>- from the analyzed local committees, the smallest number of highly educated people aged 15 and over (20-30%)</li> <li>- one of the 3 local councils (Trnsko, Siget,</li> </ul>	<b>SIGET:</b> <ul style="list-style-type: none"> <li>- Among the older local councils (Trnsko, Siget, Sopot) (the average age is 44-47 years old)</li> <li>- in the period from 2001 to 2011 The number of inhabitants decreased by -20% to -10% (Trnsko, Siget, Sopot)</li> <li>- one of the 3 local committees (Trnsko, Siget, Sopot) with the smallest number of people in the household (2.0-2.3)</li> </ul>	<b>SOPOT:</b> <ul style="list-style-type: none"> <li>- extremely high density of population (&gt; 150 st / hectare)</li> <li>- Among the older local committees (Trnsko, Siget, Sopot) (the average age is 44-47 years old)</li> <li>- in the period from 2001 to 2011 The number of inhabitants decreased by -20% to -10% (Trnsko, Siget, Sopot)</li> <li>- one of the 3 local councils (Trnsko, Siget, Sopot) with the smallest number of people in the household (2.0-2.3)</li> </ul>

<p>Sopot) with the smallest number of people in the household (2.0-2.3)</p> <ul style="list-style-type: none"> <li>- one of the 2 local councils (Trnsko, Sopot) with the largest number of single households (35-44%)</li> <li>- one of the two local councils (Trnsko, Sopot) with a slightly smaller average surface area than other local councils (50-60 m2)</li> </ul>		<ul style="list-style-type: none"> <li>- one of the 2 local committees (Trnsko, Sopot) with the largest number of single households (35-44%)</li> <li>- one of the two local councils (Trnsko, Sopot) with a slightly smaller average surface area than other local councils (50-60 m2)</li> </ul>
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## 2. PARTICIPATORY DEVELOPMENT OF PROJECT PROPOSAL

Participation of a wider audience was split in two stages:

- a) implementation stage
- b) post-implementation stage which includes future users of the space

### 2.1. Implementation stage

As part of the implementation phase of the project development, a questionnaire was prepared for residents and users of the urban areas of Novi Zagreb-west and Novi Zagreb-east. We presented the project and the team behind it, and tried to find out the local community's attitudes about possible models of Pavilion conversion. The questionnaire consists of 12 questions, with a combination of responses provided and a space for a free review / comment. The questionnaire link, developed on the Google Docs platform, was submitted at the end of December 2016 and early January 2017 to addresses of associations, primary and secondary schools, local councils, city districts, interest associations, arts and training organizations, and so on. With regard to the holiday season, the response was relatively modest; On 17.1.2017. 9 responses were received. However, one local association ("Za Kaj? Za KAJzerica!) published a questionnaire on their Facebook profile, and the number of answers received has increased considerably - until February 1, 2017, a total of 138.

- a) Survey

96% of participants live in Novi Zagreb West or Novi Zagreb East. 88% lives, works or spends their free time in the area of Kajzerica. 54% of participants know something about the Pavilion 15. 98% of participants are interested in how the Pavilion would be converted.

51% of the participants would convert the Pavilion into a market. 92% believes that the ecological or organic food market is something their neighborhood needs. 96% of participants occasionally buy ecological and/or organic and/or local products. 83% believes that there is not enough markets in their neighborhood. Most of the participants would not join the project. There were 30 e-mail addresses and 2 mobile phone numbers.

### ***Analysis of the survey***

The analysis shows that the questionnaire was filled primarily by the inhabitants of Kajzerica, 122 of them (and only 4 residents of Trnsko, 3 of Siget, and other local neighborhoods of one or two residents) who are familiar with the Pavilion (slightly more than half) Almost half of the respondents would like to see the commercial content in the Pavilion; They want some form of marketplace. In the next question, the market is the idea of transformation (our question did not explicitly mention "market"). 87% of respondents believe that there is not enough markets in their vicinity; 92% of them think that New Zagreb needs an ecological market, and 96% of them, buy food that is organic / local). Most of the respondents merely remember the Fair, with the simultaneous complaint that is nowadays neglected and unused. Finally, a relatively small number of respondents are willing to actively engage in possible events related to the Pavilion conversion project, 27.5%; Results suggest that there would be more positive results from residents who do not necessarily live close to the Fair.

## **2.2.Post-implementation stage**

The post-implementation phase involves future (potential) users of space and provides a methodology for "community development planning" i.e. community planning. After conducting a questionnaire among the local community, in this second phase the community would be treated as a co-worker in the Project. These include intensive planning meetings where residents, experts (architects, sociologists, etc.), representatives of local government and major institutions (such as

schools) work together on the vision of the project. This creates a sense of ownership and responsibility of the inhabitants towards the space, and influences their identification with the Zagreb Fair.

Urban garden users would be thoroughly questioned about their wishes and opportunities to sell or exchange their products on the market. Also, along with the NGOs that expressed their interest in cooperation, the farmers and other vendors who are already selling goods at other Zagreb eco-markets that are held occasionally around Zagreb Fair will be interviewed. Early involvement of the community, where different stakeholders cooperate in visioning the development, strengthens the social cohesion of the neighborhood and represents a significant social capital. At the same time, this ensures that the ultimate solution is sustainable.

### **2.3. Management of the Pavilion**

Various activities that would take place in the Pavilion require a person in charge of managing and coordinating events. It would be ideal for such a person to come from the local community (from Novi Zagreb-East or Novi Zagreb-West), to have a strong interest in improving the Zagreb Fair space and to have some organizational competencies. One of the options is that the events in the Pavilion are managed by a local non-governmental organization, which could be relied on by external experts in matters of organization of specific events. The advantage of such a variation is that the management is taken over by the existing association. Associations have experience in working with citizens, experience of cooperation with city authorities, and often have experience with various public calls for financing the program. The physical location of the office that would run the Pavilion would ideally be located in the premises of Zagreb Fair, from which it would be easiest to implement the projects, to host the exhibitors, to regularly monitor the work of the Pavilion etc. The local character of the association would also guarantee familiarity with the context of Zagreb Fair and the needs of the local community. In addition to a local association that would have a management body function (ie, operating at an operational level), the control mechanism would be implemented through a kind of supervisory board. Its task would be to approve relevant activities, decide on the adequacy of content, exhibitors, time schedules etc. Such a monitoring committee would consist of representatives of major stakeholders (Zagreb Fair, NZ East and NZ West districts, OPGs etc.)



### **3. TECHNICAL DESCRIPTION OF THE REGENERATION PROPOSAL**

#### **3.1. Technical description**

The Italian Pavilion was built in 1962 and is located within the Zagreb Fair location. The pavilion project was created by the studio Technico, arch. De Renzi - Contigiani. Designers are Architect Dr. sc. Raffaele Contigiani and prof. Ing. Giuseppe Sambito. The floor dimensions of the pavilion are 72 x 72 m, the height at the edges is approximately 11 m and the height of the central part is about 14 m. The pavilion construction is made of steel and consists of 12 pyramids and lattice roof rails above the central part. The pyramid is reversed so that the top is facing downward, the base up. The base of the pyramid is a square with sides 18 x 18 m. The height of the pyramid is 9 m.

#### **3.2. Current condition and damage**

##### **Bottom of the pyramid - support of the structure**

Outer appearance shows that there is deep corrosion inside.

##### **Sides of the pyramid**

There were some issues with drainage which caused corrosion. Sides of the pyramids which are turned inside suffered the most intense corrosion. They suffered from severe damage. Sheet metal covering contains apertures.

##### **Roof frames structure of the pyramid**

One roof brace is completely out of function. Bracing does not have an anticorrosive protective system.

##### **The Structure of main aperture roofing**

Roof trusses are in a good condition, they have no faults or failures which would point to irregularities of the structure.

The condition of corrosive protection is also good, considering its age.

##### **Secondary steel construction**

Vertical glass (façade) carriers have partially damaged anti-corrosion protection and there is visible corrosion. On the roof coverings of the main roof (roof façade) in the vertical corners of the roof are mostly distorted, however, this has no impact on the safety of the structure.

### **Lining and glass**

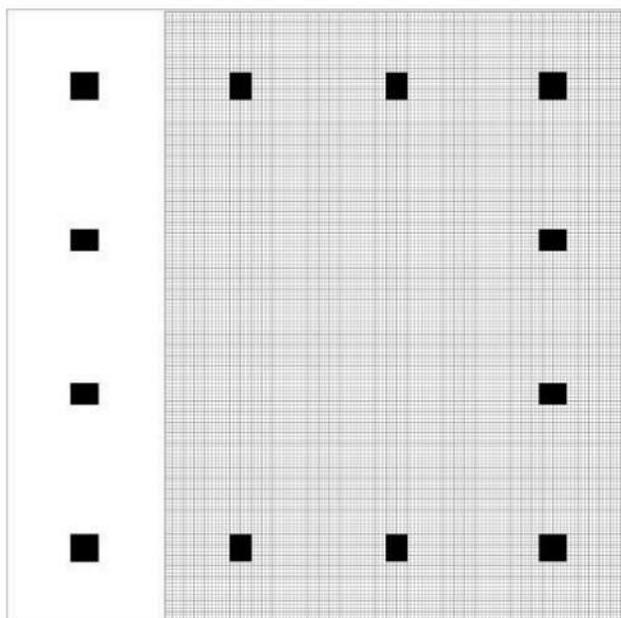
At the sloping sides of the pyramid there is reinforced glass that is 20% broken or damaged. Also some glass is completely missing. On vertical facades there is plain (unmarked) glass. The number of damaged or broken glasses is considerably smaller than that of blind edged pyramid windows. At the top of the vertical rocks (facade), there is a peeling of the anti-corrosion protection so that it affects the overall aesthetics of the object. In the northern part (near the northwest corner) the plastic cover of the roof facade is damaged so water can easily penetrate the object. This kind of damage also exists on the southern facade (at the southwest corner).

### **3.3.Object recovery**

The structure is mostly damaged by corrosion, which is visible in the parts of the pyramid due to the failure of the drainage system. These damages do not significantly reduce the safety of construction, but require preventive repair, replacement of damaged components, and the restoration of anticorrosion protection to prevent further spread of damage, which could otherwise have an impact on the overall design safety.

For aesthetic and functional reasons, broken and damaged glass and damaged roof covering must be replaced.

Existing glass facade can be replaced by new technologies with better thermal characteristics. The cost of a single facade element per piece, 290 x 250 cm, is approximately 11,000.00 kn on average, so this operation can be applied in the second stage of renovation.



*Scheme 2. Flooring – 22 204 boards 40x40 needed*

Estimated cost of sanitation:

Intervention	Price
Repairing the steel construction	2.077.168,00 kn
Repairing the roof and roof cover	648.000,00 kn
Repairing the basic façade (1st stage)	408.093,00 kn
Floor	600.000,00 kn
<b>Total</b>	<b>3.733.261,00 kn</b>

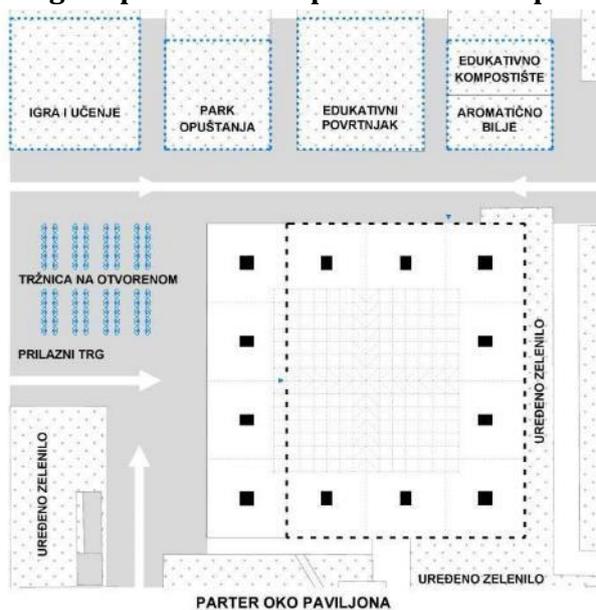
### **3.4. Regeneration intervention**

To supply the Pavilion with electricity, a photovoltaic system can be used. The ratio of electric power for the Pavilion and extra power which will be sold is going to be calculated by the end of the first year of activities. Biogas can be used for heating. Electric installations and lighting have to be replaced. Heating system and “green barriers” for placing plants could be installed. A total cost of these interventions is estimated to be **313.235,50 kn**.

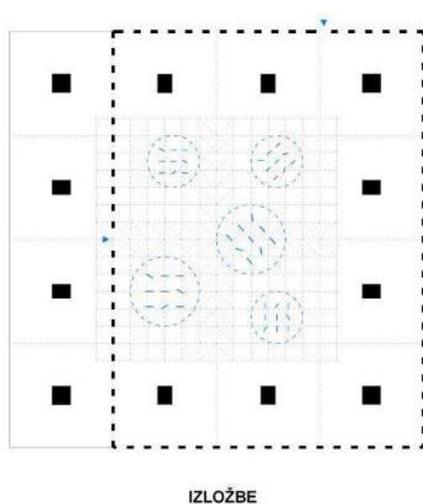
Suggestions are “elements of reconstruction and cultivation”, “elements of enclosure”, furniture elements”. “Elements of reconstruction and cultivation” are designed as structures strong enough to wear seedlings on more levels or climbing plants. . Also, there would be a miniature irrigation system

with tubes leading to each cultivation point. This would be done in order to create conditions for comfortable usage of the Pavilion, without wasting extra energy for getting the desired temperature. A suggestion is using “elements of enclosure and heating”. Canopies can be used to form “warm rooms” in the centre of the Pavilion. “Furniture elements” are mobile, interconnected string of transformable frames, in order to encourage more usable materials, frames are made of wood, and they are recyclable.

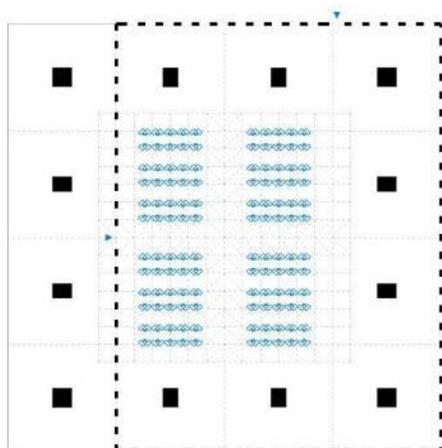
### Using the pavilion and space around the pavilion



Area around the Pavilion

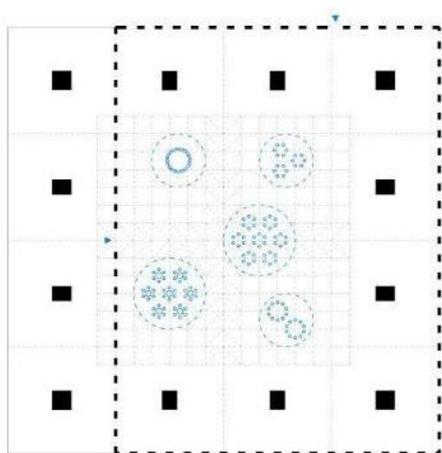


Exhibitions



TRŽNICA

Market



RADIONICE/TEČAJEVI

Workshops/courses

### 3.5. Suggestions for planting – selection of plants and herbs

Main plan is to plant herbs on green bulkheads inside the Pavilion. Plants can grow on several levels, when it comes to vertical planting and it creates more from less space.

In a vertical garden almost all sorts of vegetables can grow. Plants such as climber plants, creeping plants, Brassica plants, nightshades, leaf vegetables, microgreens, baby vegetables, herbs can grow successfully in vertical gardens.

Estimated cost for planting and related work needed is **72.800,00 kn.**

### **3.6. Waste management**

During the regeneration period, we predict there will be a lot of construction waste. In case of an arrangement with the city, it can be recycled. Most of the waste created during the conversion is organic waste which will be used for biogas. One part of organic waste will be composted. Composted waste will be available to the public, participants of educational and practical workshops and other interested groups.

Other types of waste are paper, cardboard and plastic. They can be used for recycling, creative recycling or used in educational and creative workshops. This will encourage using jars which are reusable and avoiding plastic bags. Also, there are other creative ways of dealing with plastic waste. It can be used for buildings or highway roads. Plastic bottles can be used for growing herbs and planting.



An example of composting

### **3.7. Usage**

Different activities planned for the Pavilion make it possible to use it in different times of the year. During the warmer part of the year, in the mornings different educational activities could be held for older children and young people. During the weekends there would be eco-markets. During the winter, there could be workshops for fixing bicycles and IT equipment. Weekends can be used for culinary activities.



## **4. ENVIRONMENTAL, SOCIAL AND CULTURAL EFFECTS OF REGENERATION PROJECT**

### **4.1.Environmental, social and cultural effects of the project**

The Italian pavilion has not been in use since 2008, or has been used occasionally for storage purposes only. In the fall of 2016, there were mattresses used by refugees after the Zagreb Fair had become their temporary shelter in the fall of 2015. Throughout that time the Pavilion started to deteriorate, its constructive and static quality was ruined by time, while Zagreb Fair continued to pay the communal fee (approx. 300.000,0kn per year). Putting Pavilion no. 15 in use has multiple effects, and its sustainable use is one of the protection methods (it is well known that often protected objects deteriorate faster due to no usage).

### **4.2.Function of space**

The main purpose of the space will be commercial (eco-market), with organic and / or eco and / or locally-grown foods and products. The main users of the Pavilion will be farmers, fresh food vendors, vendors of food products and other related products. In addition to displaying and selling food and other products, the Pavilion will be a place for culinary courses, health education, ecologically acceptable lifestyles, food presentations and specialties that represent foreign countries, which will also stimulate tourism and culture. Thematic evenings can be organized here (e.g. a Spanish Kitchen Week, a Fish Specialties Week, or a Week of Raw Food), This can be a reminder of the days of international fairs, when national pavilions promoted the values of their countries. The most important conversion effect will be the frequency of use and the number of people who will visit the Pavilion. This provides the opportunity for improvement for other pavilions of Zagreb Fair. This transformation of the Italian Pavilion aims to create a destination which should restore the Fair to the mental map of most residents of Zagreb.

### **4.3.Three pillars of sustainability**

*Co-funded by the Erasmus+ Programme of the European Union.  
This publication reflects the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.*

The fundamental feature of the project is its sustainability. Throughout all the phases of shaping this conversion proposal, we have been careful that the project is (self) sustainable, and we have tested all the ideas of transformation in view of their level of sustainability. Market proposal as a kind of pilot in which to sell and / or exhibit food products, and thus promote sustainable lifestyles with a focus on food, is aligned with all three pillars of sustainability - economic, environmental and social. In addition, the value of the project is not only in the fulfillment of individual pillars of sustainability - it represents more than the sum of the three pillars. Synergy effects of the project generate significant added value.

The Pavilion regeneration Project will encourage not only the sale, but also the exchange and presentation of the products. Waste of organic origin, will be composted on site and the resulting compost will be used to feed plants in the beams in front of the Pavilion. As far as possible, all the material to be used in the Pavilion, and after its primary use, will serve as a raw material for another product. In this way, the life cycle of each material will be maximally extended. The power for the Pavilion will be partially obtained from renewable sources, and through photovoltaic cells on the roof of the Pavilion. In addition to the commercial function, the Pavilion will also have an educational function, given that sustainable living styles will be promoted here, with focus on food, plant cultivation and farming (permaculture, biodynamics), exchange of healthy eco products (seed, kefir beans, etc.) Etc. Such a renowned Pavilion will also represent a new public space for all residents of (New) Zagreb, which will enable them to socialize, a place to meet, to get acquainted with each other, thereby strengthening the spirit of the community and developing a sense of belonging to the neighborhood.

Sustainability indicators which measure the three dimensions include:

**Aspect: Economy**

- Number of vendors
- Income and expense

**Aspect: Energy**

- Energy consumption
- Energy savings

**Aspect: Water**

- Main indicators of water quality
- Percentage and volume of recycled and reused water

**Aspect: Materials**

- Percentage of used material, for recycling
- Percentage of categories of products and services which had a prolonged lifecycle

**Aspect: Waste**

- Total weight of waste sorted by type and method of recycling

**Aspect: Transport**

- Significant influence on the environment during transportation of products and other goods and materials used for selling/exhibit and transport of workers

**Aspect: Society – Diversity and equal opportunities**

- Percentage of inhabitants who volunteered on projects related to the Pavilion previously
- Structure of exhibitors/vendors by sex, age, minority groups and other diversity indicators (disabled persons)

## **5. INTERNAL AND EXTERNAL RISKS**

External risk represents the possibility of eliminating the status of protection, and then the Pavilion will be crashed, which is the highest degree of threat. Likewise, the external risk is also the inability of the owner (City of Zagreb) to convert the Pavilion for different usage. In addition, the poor economic situation of their citizens, which would prevent them from buying food products other than the most necessary, may affect the low level of sales within the Pavilion, and consequently, the exit of the seller/exhibitor (lack of demand).

The risk is certainly a weak response from potential vendors and exhibitors (lack of bidding), which would consider that their sales / exhibitions in the Pavilion cannot have positive effects. Likewise, there is a risk of disinterest of the other side, ie potential visitors (local communities as well as other residents of Zagreb), who will not consider the Pavilion to offer valuable services.

Further deterioration of Pavilion's stability is an internal risk, which can be affected by weather (such as wind blows) and the general flow of time.

## **6. BUSINESS PLAN**

### **6.1. Business analysis**

The Zagreb Fair is a subsidiary of Zagreb Holding and is managed by the city administration of the City of Zagreb.

The primary activity of the company is the preparation and maintenance of the fair activities, and the renting of space to companies and associations. Every year, the Zagreb Fair holds more than 20 specialized events. More than 5,000 exhibitors from 50 countries and nearly 500,000 visitors attend Zagreb Fair each year, both experts and business people. In addition to fair events, there are also international congresses, consultations and symposiums at the Zagreb Fair, where the renowned names of domestic and world sciences regularly participate. The company realizes profits through the minimums defined by the price list.

The total area of the Fair is 560,000 square meters. It is located in the area of New Zagreb between the neighbourhoods of Kajzerica on the west and Središće on the east side, and it is bordered by Dubrovnik Avenue on the south side and on the north side of Jozsef Antalla. Due to these features, Velesajam has a great traffic connection and easy access to the Fair pavilions. The company has 40 pavilions dedicated to different activities.

Zagreb Fair is planning to renovate Pavilion no. 15 (Italian pavilion) and transform it into a market of healthy food with accompanying educational content.

## **6.2. Business activities and structure of the business**

The legal form of the organization to manage the Pavilion is a NGO. Its activities will be: organization of events (eco-market, educational activities, culinary workshops etc.), promotion of events (i.e. Pavilion) using internet and media and association with related concepts (on the principle of "exchange of knowledge and experience"). The detailed activities of the association, as well as the work plan, will be listed in the Statute of the Association. The association will find exhibitors, sellers, lecturers, etc. The Association will submit a work report to the Supervisory Board (quarterly or annually) on the activities carried out and the financial resources spent in the previous period (past quarter or year). The Supervisory Board will be composed of representatives of the main stakeholders: Farmers, other exhibitors, Zagreb Fair and city districts NZ East and NZ West.

## **6.3. Planned investments**

Investment for development of space	Price
Total	4.146.496,50 kn

## **6.4. Structure of investment**

Plans for the first year

	Price
Total	4.105.464,20 kn

## **6.5. Market and competition assessment**

By opening a food market in Pavilion no. 15 there is a possibility for a large number of exhibitors who do not have to work in a crowded space. The vicinity of Trnsko, Središće, Utrine, Kajzerica and Siget

ensures good visibility. Zagreb has a lack of markets where food can be purchased from small farmers and businesses.

It is a great advantage of the location with regard to other Zagreb markets, the location of Pavilion no. 15 located at the intersection of large avenues, and is connected by public transport to all parts of the city.

## 6.6.Purchase

The Fair will provide all materials and necessary work through public procurement procedures in accordance with Croatian law, since it is a publicly owned company owned by the City of Zagreb. Everything that we need for adaptation can be obtained in Croatia, while some specific components will be purchased from abroad.

## 6.7.Income during the first year

	Monthly income	Yearly income
Total	540.000,00 kn	6.480.000,00 kn

## 6.8.Cost analysis

Cost	Yearly costs
Total	324.000,00 kn

## 6.9.Expected Profit

Profit	
Expected net profit per year	4.924.800,00 kn

### *Expected net profit in the first year*

Expected net profit in the first year	819.335,80 kn
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## 7. FINANCIAL AND MARKETING STRATEGY

At the stage when the Pavilion is transformed, in order to increase its visibility, it is necessary for the citizens to discover it on their own; by visiting Zagreb Fair's events, biking, driving a car or public transport next to it etc.) As a minor aid to the realization of this visibility, basic signaling will be made (floor, wall and poles of public Lighting / garbage cans / other urban furniture etc), which is close to Zagreb Fair or within it, which will guide people towards the Pavilion. In this way, citizens will be aware of the existence of new content in their neighborhood or city, and they will be directed to the exact location of the event.

One of the intended uses will be a gastro show that will promote national cuisine from Europe and the rest of the world. This will create a direct link with the symbolic legacy of Zagreb Fair. Here we will try to establish cooperation with the Embassies located in Zagreb or the International Women's Club (IWCZ), which will ensure their presence in the media through their channels. The methods of cooperation with the embassies or the IWCZ are numerous: publication of events on their websites; providing local food used in international kitchens etc.

Tourist promotion represents another important planned marketing strategy. Given the specificity and specialization of this market, the emphasized educational (culinary courses, education on healthy and ecologically acceptable lifestyles) and the cultural component (presentation of food and specialties coming from different countries / cultures, the significance of Zagreb Fair with its own history and tradition) and gastronomic manifestations (e.g. Spanish cuisine week, Fish specialties week, ...), the assumption is that this type of transformation of the Italian Pavilion will attract not only the local population, but also the local and foreign tourists. According to trends in the wider tourist market, gastronomic tourism is growing and gastronomic tourists are looking for the authenticity of places that visit food, care about the origin of products; recognize the value of gastronomy as a means of socialization, a place to share life and experience with others. The aforementioned features and needs of gastronomic tourists can be fully met in our specialized market, which, in addition, provides interaction with the local community and provides a special tourist experience. In order to strengthen the visibility of the Italian Pavilion as a tourist location on tourists' plans during their visit to Zagreb, it is necessary to brand it as a specific tourist product of a clear, recognizable and unique identity. Branding, as well as further promotion, is possible through the making of souvenirs, such as aprons, eco-products from biodegradable materials, etc. The successful visits by tourist of the Italian Pavilion go along with its geospatial position at the

crossroads of key city roads in the north-south direction (Većeslav Holjevac Avenue and west-east (Dubrovnik Avenue), close to the airport, the city center and good public transport connections.

## **8. ATTACHMENT I (list of received responses from the questionnaire, selection)**

Question no. 6 – Describe your proposal for the conversion

- Market (25)
- Educational activities for children
- Sports
- Green Market
- Concerts, conferences
- Activities for children
- Selling farmers' products
- Sports and educational activities

Question no. 10 (selected replies) – What is your experience with the Zagreb Fair space?

- It was nice
- It was nice, but not used enough. It seems that Zagreb Fair is in a bad condition
- Hobby – football
- Mostly nice
- Nice experience, I have been using it my entire life
- It has a good potential, but it is wasted
- Christmas fair
- A lot of unused space
- Pleasant memories
- Business in the past, now only sports
- It should be torn down
- Ice skating as a child
- My current experience is related solely to my children's sports activities. I am delighted to remember the former Christmas fairs held in Zagreb Fair.
  - Beautiful and unfortunately unused space
  - Getting to Interliber or some other fair is my personal experience. My parents have memories at the Fair when it was at the peak of its business and carrying wonderful memories.
    - My child does sports in the 25th Pavilion
    - From Kajzerica, we could walk there, but because of the inadequate traffic regulation we never send children themselves. We have to drive there.